

ALERT NO: _____

Date: <DATE> _____

INVENTION ALERT FORM

TO: Galle Bailey M/S 2061/Extension 32724

CIRCLE ONLY ONE FROM TOP ROW/REQUIRED FIELD:

EP/ SUBSTRATE	WCVD /	CMP	METAL	CPS	CORE ENG	COPPER	AKT	ATD	APD	FET	HDPCVD	CONDUCTIVE	MDR	ETEC
3365	2492	1399	8981	0676	0793	2492		1301		3037	0381	1077		
OXD 3365	Ti/TiN 2492		SILICON 0916	SMO/ GAS 1649	EPS 2590	ALUMINUM 2492	EBT		CDSEM	MDR/DSI 3047	BCVD 0166	PARAMETRIC 1755	MMCS/ APC	RT
LPCVD 3365	ALD		DIELECTRIC/ RIE 0521	SMO/ PUMP 1651	DT 2492	LINER/ BARRIER 2492			WP		LOW K 2445	ORGONCON 2471	MMCS/ Modular Controller 3413	
GCM 3365			DIELECTRIC/ ICP 0521	EPIC 2442		Copper Plating(SCP) 2492			DRSEM		ELK 2445	ORGONPAR 2471	SmartSys	
WBT CLEAN 3365			CONDUCTOR 0894	SCALPEL					CIEMI				PDC-DSI 3396	
PMID 3365			CHAMBER TECH 0894	CONSILIUM 2199					ICT					
OTHER 3365			CORE TECH 1245	ECOM					EBI					

COPPER	Dual Dam

Title of Invention (please print clearly): Tight wafer pocket heater for Bevel edge deposition reduction.

OMPUTER ENTERF

<DATE>

2. Inventors-Names only-(please print clearly and provide complete information at Section 2.)

Mark A Fodor, Sophia Velastegui, Somyo Sen, Visweswaren Sivaramakrishnan, Peter Lee, Dave Silvestri

0008295

<DATE> | <TIME>

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Please use separate attachments for any answers that don't fit on the form, especially for questions 3-8. If the answer to a question is "NONE", please write "NONE" rather than leaving the answer blank.

3. Earliest dates and model names of all Applied products incorporating the invention which have been offered for sale or are expected to be offered for sale:

Invention is potentially applicable to all Producer Platforms equipped with any PECVD, LOW-K or SACVD type deposition process chambers. The earliest expected "offer for sale date" could be as early as <DATE>. Of lesser importance the invention is also potentially applicable to any Centura Platform equipped with any DxZ type PECVD or SACVD process chamber.

4. If the invention has been demonstrated or described to persons other than Applied employees, for each disclosure please provide the earliest date, name of company, a brief description of what was disclosed and the purpose of the disclosure. Attach a copy of any related non-disclosure agreements:

5. If future disclosures like those in Question #4 are expected to occur within the next 12 months, please provide the anticipated date, type of information to be disclosed, and purpose of the disclosure:
NONE []

None that we know of.

6. Describe any other known designs or processes, whether actually implemented or merely proposed in a publication, which could be considered similar to your invention or which constitute the state-of-the-art improved upon by your invention: If described in a publication, attach a copy of same or provide a citation.

None that we know of.

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7. List each feature of the invention which you consider novel and non-obvious. Describe the advantages of each novel feature in comparison with the state-of-the-art approaches which are most similar to your invention:

- (1) A wafer pocket whose inside diameter is designed such that it is as proximate as possible to the wafer edge.
 - (2) A wafer pocket lip profile that is at least 1/2 wafer thickness in height perpendicular to the wafer pocket tapering outward and upward at an angle steep enough and high enough to ensure wafer capture upon transfer.
 - (3) A wafer pocket described in 7(1) and 7(2) that outside of the wafer capture area, tapers down to the level of the plane of the wafer pocket.
 - (4) A wafer pocket described in 7(1), 7(2) and 7(3) that separates the functionality of wafer bevel edge deposition reduction using a continuous geometry completely around the wafer and the functionality of wafer capture using discreet tapered crowns or other suitable features arrayed around the wafer.
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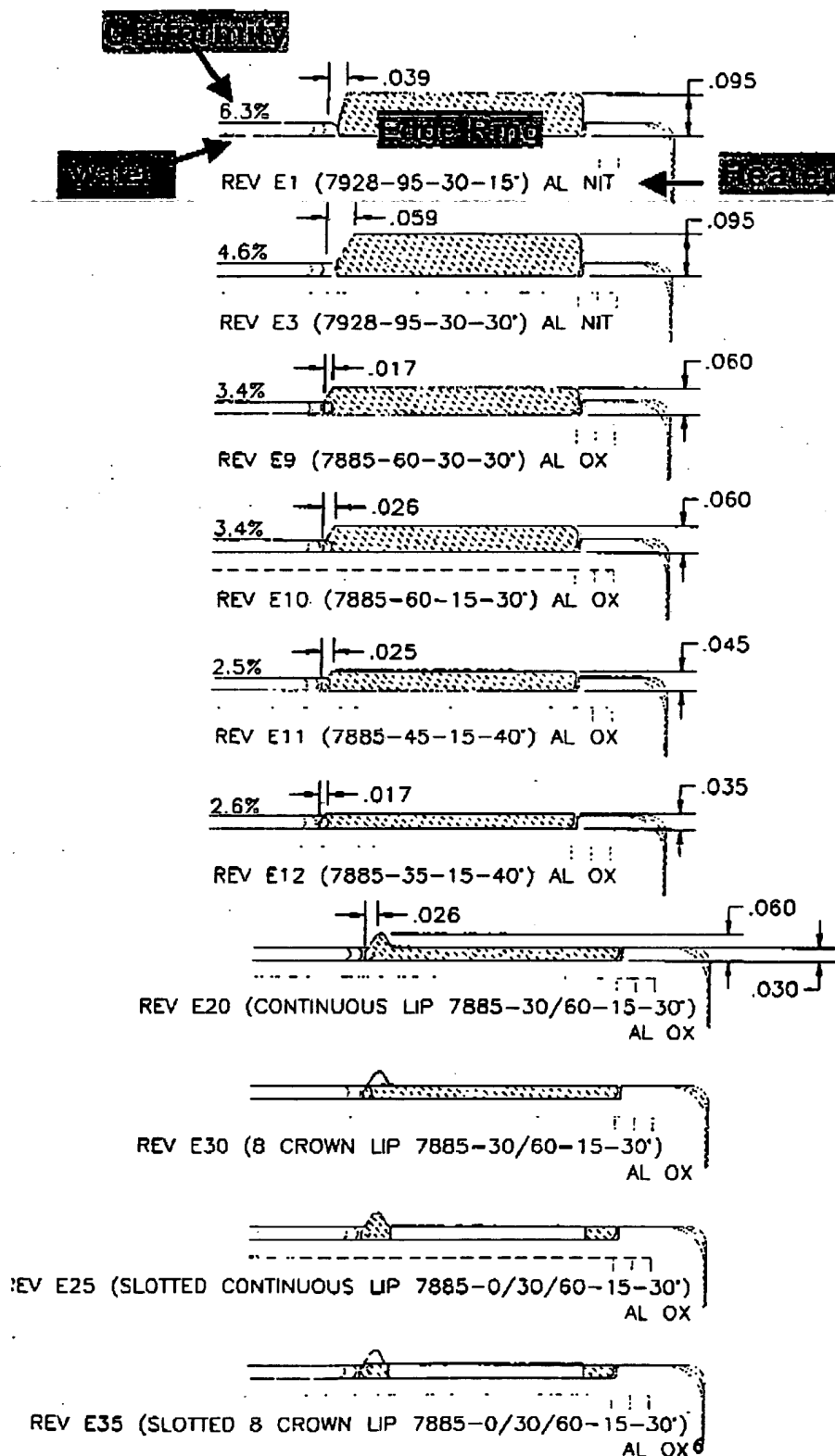
8. Describe the invention, preferably with reference to attached drawings:

The invention is either a heater or an edge ring sitting on a heater that embodies the features described in section 7. Sheet 6 depicts the edge rings Rev E9 through E12 having embodiments described in 7(1) and 7(2). Rev E35 edge ring depicted on Shts 6 and 7 is a test bed edge ring having the embodiments described in sections 7(1) through 7(4).

Sheet 8 depicts a tight pocket heater containing embodiments described in sec 7(1) and 7(4). Based upon the film uniformity trends documented on Sheet 5, and pending test results of the Rev E35 edge Ring, it is believed that this heater would reduce bevel edge deposition and deliver acceptable film uniformities. Sheet 9 is a graphical depiction of wafer bevel edge deposition on a standard heater. Sheet 10 shows reduced bevel edge deposition using the E11 and E12 edge rings.

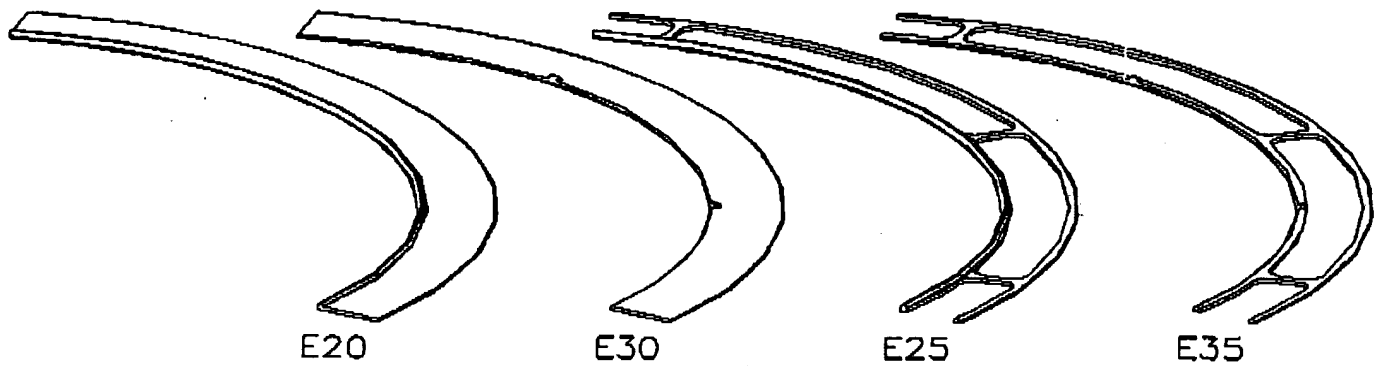
ATTACH ADDITIONAL SHEETS TO DESCRIBE INVENTION AS NEEDED

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Different forms of Edge Rings :

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Different form of edge Rings (Isometric Views):



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**Tight Pocket Heater for Bevel Edge Deposition Reduction and Optimum
film deposition thickness uniformity.**



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Provide the following information for EACH inventor** REQUIRED FIELDS:

Inventor #1:	
Legal Name:	Mark A Fodor _____ Employee # _____ Mail Stop _____
Work Phone	_____
Job Title:	_____
Citizenship:	< CONFIDENTIAL >
Complete Home Address:	_____
Manager:	_____
Div. Manager	_____
Product Group:	_____

Inventor #2:	
Legal Name:	SOPHIA YECASLEGUI _____ Employee # _____ Mail Stop _____
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Citizenship:	< CONFIDENTIAL >
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Manager:	_____
Div. Manager	_____
Product Group:	_____

Inventor #3:	
Legal Name:	SOOVO SEN _____ Employee # _____ Mail Stop _____
Work Phone	_____
Job Title:	_____
Citizenship:	< CONFIDENTIAL >
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Manager	_____
Div. Manager	_____
Product Group:	_____

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FOR ADDITIONAL INVENTORS, PLEASE COMPLETE AND ATTACH ADDITIONAL SHEET AS NEEDED.

ADDITIONAL INVENTORS:

Inventor #	:	
Legal Name:	VISWESWARAN SIVARAKKRISHNAN	Employee #
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Div. Manager		
Product Group:		

Inventor #	:	
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Manager:		
Div. Manager		
Product Group:		

Inventor	:	
Legal Name:	DAVE SILVETTI	Employee #
Work Phone		
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Home Address		
Manager		
Div. Manager		
Product Group:		

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10. Signature, date and **PRINTED** name of each inventor plus two witnesses who have read and understood this Invention Alert form:

Inventors:

<u>Mark A Fodor</u>	<u><DATE></u>	<u>Mark A Fodor</u>
Printed Name	Date	Signature
<u>SOPHIA M. VELASTEGUI</u>	<u><DATE></u>	<u>S M Velastegui</u>
Printed Name	Date	Signature
<u>SOOVO SEN</u>	<u><DATE></u>	<u>Soo Sen</u>
Printed Name	Date	Signature
<u>PETER LEE</u>	<u><DATE></u>	<u>Peter Lee</u>
Printed Name	Date	Signature
<u>V SIVA</u>	<u><DATE></u>	<u>V Siva</u>
Printed Name	Date	Signature
<u>DAVE SILVETTI</u>	<u><DATE></u>	<u>Dave Silveti</u>
Printed Name	Date	Signature

Witness:

<u>Cheryl Traynor</u>	<u><DATE></u>	<u>Cheryl Traynor</u>
Printed Name	Date	Signature
<u>Diane Suppach</u>	<u><DATE></u>	<u>Diane Suppach</u>
Printed Name	Date	Signature

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